

Kauri Dieback Programme

ANNUAL OPERATING REPORT 2009/10



Acknowledgments

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FOREWORD

Kua hinga he kauri i te wao nui a Tane. He waka eke noa.

Our kauri forests are woven into our history and sense of identity. We value them from many different perspectives – as part of our ancestral heritage and whakapapa, as fundamental to tourism and our economic prosperity, for their ecological value, as places to visit and enjoy, as a source of timber and medicines, as fundamental to our wellbeing – and what unifies us is a common commitment to protect them for future generations.

This commitment was reflected in decisions taken by Cabinet, tāngata whenua and regional councils in late 2009 to jointly lead a programme that protects kauri from a new-to-science disease, *Phytophthora* taxon Agathis or “kauri dieback”. This disease presents a serious threat to our precious kauri forests, killing trees of all ages from saplings to long-lived trees.

The partners leading the programme to protect kauri are tāngata whenua, Auckland Regional Council, Environment Waikato, Northland Regional Council, Bay of Plenty Regional Council, Department of Conservation and MAF Biosecurity New Zealand. This partnership weaves together our various strengths, all of which are needed if we are to protect our ancient kauri forests from the threat of kauri dieback.

The overall strategy to protect kauri from this disease is to contain it to infected sites, reduce its impact within those sites, prevent or slow its spread across the kauri region and concentrate effort to keep it out of high value sites that are disease free.

All New Zealanders, and our visitors, have a part to play – by keeping to defined tracks, cleaning footwear before and after leaving kauri forest areas and staying away from kauri tree roots.

Over the first nine months of the programme the key focus has been to learn more about the disease and how to manage it, to put in place protection within our forests (for example, in the form of track upgrades and cleaning practices and facilities at forest entrances and exits) and to get information and supporting tools out to forest users (for example, in the form of the Care for Kauri Guide, fact sheets and signs). Another important focus has been on developing the long-term management plan for the programme and the core team to deliver this. Key achievements and lessons to date are recorded in this annual report.

Progress has been communicated to interested parties through distribution of the newsletter Kauri Kōnnect, with detailed programme information made available on a dedicated website: www.kauridieback.co.nz

Looking to the year ahead, our main focus is to initiate the surveillance programme that will help us gain an understanding of where this disease is and is not located. The outcome of this will help us to refine our strategy and target effort or re-evaluate if the disease proves more widespread than we currently know and predict. As we clarify the “disease status” of key kauri sites, we need to plan and implement the best mix of protective measures (signage and interpretation, track hygiene stations, track upgrades, track re-routing or closure and/or animal vector control) at each site.

While we have started to get the message and supporting information and tools out to forest users in 2009/10, considerably more effort is needed in this area. There are great networks available – through marae, tramping and hunting clubs, industry bodies and various community groups – and through these we need to support forest users with good information and, in some cases, training and equipment so they can effectively play their part in helping to prevent the spread of the disease.

Finally, I would like to warmly acknowledge the efforts of the many people who have worked tirelessly to get the kauri dieback programme up and running, and who are already playing their part in their communities and on the ground “so that our kauri stand proud”! He waka eke noa.

Andrew Harrison
Chair
Kauri Dieback Leadership Team

TABLE OF CONTENTS

Key Achievements 2009–10	5
Introduction	7
How the long-term management programme was formed	8
What we know about PTA and where it is located	9
Outcomes of the long-term management programme	10
Tangata Whenua Roopu	10
Learning more about the disease	11
Surveillance	11
Preventing the spread of PTA	12
Spreading the word	13
Programme management, planning and monitoring	14
Where to from here	14

KEY ACHIEVEMENTS 2009–10

Cabinet and councils agreed to fund the programme.

Guiding documents, including a Partnership Charter, were developed. This sets out the way the partners would work together and clear outcomes for the programme.

A Tāngata Whenua Roopū has been established to enable participation of Māori in the programme.

A Long Term Management Plan was drafted.

Leads for the Operations, Logistics and Planning and Intelligence workstreams were appointed.

A pilot cultural effects assessment was undertaken. The pilot assessed the threat PTA poses to Te Roroa, their values, their taonga and their relationships.

Cleaning stations were installed in Waipoua Forest (1) and Trounson Park (3). The network of cleaning stations in the Waitakere Ranges was also extended, with 92 stations now installed.

27 event cleaning kits were produced and delivered to DoC offices, Te Roroa headquarters and iwi on Great Barrier Island.

Information and awareness signs were developed by the partnership.

A track management and upgrade project was commenced.

A methodology for detection of PTA within soil, and a soil sampling protocol, were developed.

Surveys for dieback symptomology were carried out in a number of national and regional parks and on private land.

Research was completed to:

- identify hygiene methods to limit spread of PTA;
- test awareness of kauri dieback, and appropriate actions to slow the spread of PTA, amongst track and forest users.

A Communications Strategy was agreed including a set of protocols for sharing information and dealing with media enquiries.

Existing factsheets were revised to reflect the move to long term management and Māori involvement as a partner. A new factsheet on the science behind PTA was developed.

A Care of Kauri Guide for landowners was developed.

The kauri dieback prevention message was spread via BioBlitz, Field days and several multisport events.

A field trip and special discussion session were held as part of the International Union of Forest Research (IUFRO) “Phytophthora in forests and natural ecosystems” Conference March 7 – 12, 2010. This was an opportunity for international delegates to give their expertise and feedback on the management programme for kauri dieback and make recommendations on the areas of research, communication/ education and management that should be prioritised.

INTRODUCTION

This annual report outlines the transition of the kauri dieback response to a long-term management programme. It also reports on programme progress, provides an overview of activities and highlights successes for the first nine months (October 2009 to June 2010).

The goals for 2009/10 were for a successful transition into long-term management; to continue with research and surveillance; to maintain or increase the level of public awareness reached; and to communicate with a wide audience.

Confirmation that *Phytophthora* taxon Agathis (PTA) has been present in New Zealand since the 1970s, and the nature of the disease, has meant that eradication is not feasible and long-term management is the most appropriate course of action. As such, the long-term management

programme aims to contain the disease while research continues into finding out how it is spread and how it can be detected and controlled.

Public awareness and behavioural change is also an important aspect of this programme. A communications and engagement strategy is in place and includes the development of a publicity campaign in 2010/11 that will involve the production of signage, brochures, posters and other educational material on kauri dieback.

The main messages underpinning this campaign will continue to be around explaining PTA as a disease and that spread can be minimised by following simple hygiene measures – for example, cleaning footwear and equipment before and after visiting kauri forest and keeping to tracks.



HOW THE LONG-TERM MANAGEMENT PROGRAMME WAS FORMED

MAF Biosecurity New Zealand (MAFBNZ) declared PTA an “unwanted organism” under the Biosecurity Act 1993 in October 2008 and a joint agency response group was established that included the Department of Conservation, Auckland Regional Council, Northland Regional Council, Environment Waikato, Bay of Plenty Regional Council and iwi.

Initial activities of the response group included:

- conducting research into how to identify PTA and slow its spread;
- raising public awareness of PTA;
- informing iwi and interested parties about the response;
- developing hygiene procedures and kits to help minimise the spread of PTA;
- developing a Business Case identifying all options for managing the disease;
- preparing proposals to chief executives and Cabinet for funding for a five-year management programme.

In October 2009, Cabinet and regional councils agreed to fund a long-term management programme aimed at reducing the impact of PTA in the most cost-effective way possible and to provide for the programme’s long-term survival. The components of the funded programme include:

- identifying high priority sites for protection;
- developing sampling and diagnostic tools for determining infected areas;

- assessing the extent of PTA throughout kauri forests;
- implementing a cost-effective suite of hygiene measures and management activities to slow the spread of PTA by targeting high risk vectors (both human and non-human);
- developing methods to mitigate the impacts of PTA on kauri.

Before transitioning to the long-term management programme, a series of hui were held to reach tāngata whenua. The aim of these hui was to share information and seek views on future engagement. This enabled a plan to be formed for tāngata whenua engagement under the long-term management model. A group, the Tāngata Whenua Roopū, has been established to provide advice into all aspects of the long-term management programme as well as a forum for engagement.

Kaumātua from the Tāngata Whenua Roopū have developed the following aspirational statement for the programme:

Ko te kauri he whakaruruhau mō te Iwi katoa

Kia toi tū he whenua

Kia toi tū he kauri

The kauri is a shelter for all peoples

So that the land is sustained

So that the kauri stands proud



WHAT WE KNOW ABOUT PTA AND WHERE IT IS LOCATED

PTA, or kauri dieback as it is commonly known, is a fungus-like organism that is associated with dieback of kauri trees in Auckland, Northland and Great Barrier Island. It affects only kauri and can kill trees of all ages and sizes.

Originally identified as a different *Phytophthora* species in the 1970s (as a result of research undertaken into kauri dieback observed on Great Barrier Island and based on diagnostic tools available at that time) PTA was correctly and formally identified as a new organism in late 2008.

Testing of historic samples has revealed PTA's presence on Great Barrier Island since at least 1972 and at a limited number of Auckland and Northland sites since at least 2006. Given the nature of the organism, it is probable it has been present at these sites for much longer than this.

PTA's origin is unknown, but we do know it is soil borne and spread by soil movement. It attacks a tree through its roots, and symptoms include bleeding lesions at the base of the trunk, leading to canopy thinning, dead branches and eventual tree death.

PTA produces both soil- and water-borne spores. Soil-borne spores are spread by people, feral animals and naturally through underground root-to-root contact. The water-borne spores can move through soil waterfilm, though they do not survive for long periods.

All these factors inform both our research and management programmes, which aim to build on the limited knowledge we already have, while taking a precautionary approach to contain the disease as much as possible while research is under way.

Our assumption at this stage is that PTA is more widely distributed than we currently know, but it is not widespread and there will be significant areas of kauri forests that are disease free.



OUTCOMES OF THE LONG-TERM MANAGEMENT PROGRAMME

Outcomes we are trying to achieve through this programme are that:

- PTA-free sites remain disease free;
- known PTA-infected sites are contained;
- the impacts of PTA and its management are reduced within infected sites;
- the spread of PTA is slowed to all kauri areas;

- effective working partnerships are established between Crown, Māori and regional authorities acting collectively in New Zealand's best interests in the management of PTA.

The effectiveness of the programme – in terms of achieving these outcomes – will be measured by applying a new performance measurement system developed for use by pest management organisations.

TĀNGATA WHENUA ROOPŪ

During the response phase of the kauri dieback programme, the joint agency team convened an independently facilitated series of hui with tāngata whenua in areas where kauri forests exist. The aim of these hui was to share information and seek views on future engagement. The outcome of these hui was a proposed model for tāngata whenua involvement that was tested before being used as a “working model”, which will be refined as implementation proceeds.

An interim Tāngata Whenua Roopū convened its first hui in October 2009. Following this, a request for expressions of interest for participation in the roopū was sent to hapū and iwi with mana whenua over kauri forest stands and to owners of multiple-owned Māori land that has kauri forest stands.

The first full hui was convened in December 2009.

The purpose of Tāngata Whenua Roopū is to provide advice from tāngata whenua into all aspects of the long-term management programme and to provide a forum through which tāngata whenua can engage with the programme. It is not designed to be the voice of tāngata whenua but rather to complement current arrangements with agencies.

Two key pieces of work in 2009/10 have been the development of a Cultural Effects Assessment to identify the nature of cultural effects of kauri dieback and the response to it and the development of a Relationship Monitoring Framework to measure the effectiveness of the partnership between tāngata whenua and others in the long-term management programme.



LEARNING MORE ABOUT THE DISEASE

The purpose of the research is to support the long-term management programme by gaining knowledge about the behaviour of PTA and how to reduce its spread and impact, and to use this information to inform management activities.

An independent technical advisory group (TAG), comprising experts in the fields of plant pathology, ecology, mycology and Mātauranga Māori, provides research advice to the programme.

Research completed in 2009/10

Hygiene Methods to Limit PTA Spread (October 2009)

The purpose of this research was to determine the best hygiene methods for people to use for cleaning footwear and equipment to limit the spread of PTA. This research confirmed that using Trigene to disinfect footwear and equipment was a suitable method for limiting the spread of PTA.

Research due for completion in 2010/11

Methodology for Detection of PTA in Soil

The purpose of this research is to optimise

methodology for detecting PTA in soil samples and to identify symptoms that can improve field identification. This research has been under way since April 2009 and was completed in September 2010.

Plantation History 1 (due October 2010)

The purpose of this research is to ensure that historical data about kauri plantations and nurseries is collected before this information is lost. The project will do this through interviewing people who worked in kauri forests and nurseries from the 1960s onwards, including those with a close association with Waipoua Forest and its historical management.

Research due for completion in 2012/13

Fundamental Ecology and Pathology of PTA (due June 2013)

This research will include developing an understanding of the biology and genetics of PTA, how it moves through the landscape and how it infects and spreads through individual trees.

SURVEILLANCE

Passive surveillance relies on reports from agencies and members of the public. Locations of trees with suspected PTA symptoms are mainly reported to the 0800 NZ KAURI hotline.

In 2009/10, six properties were visited by Northland Regional Council staff, none were confirmed as having kauri dieback. In the Coromandel/Waikato area, 11 properties were visited and none had kauri dieback present.

Auckland Regional Council staff visited 62 properties – 25 showed general ill thrift, 24 showed no symptoms, however, 13 properties had obvious PTA symptoms.

Active surveillance is targeted at significant sites and physical and ecological factors that may be a significant factor to PTA spread.

Although the Business Case predicted an initial round of active surveillance would occur in 2009/10, this work has been deferred to ensure the surveillance programme design is robust and, specifically, to realise the benefit of key research outcomes. Many important planning activities were under way in 2009/10, however, including the development of a surveillance plan and preparation for the first round of work.



PREVENTING THE SPREAD OF PTA

New hygiene stations: In 2009/10 work began to install new cleaning stations in Waipoua Forest (four) and Trounson Park (two) in Northland. Event cleaning stations were delivered to all Department of Conservation offices that have kauri forest, Te Roroa Headquarters at Waipoua, and to iwi on Great Barrier Island.

Signage: Partnership signage has been developed by the Engagement and Behaviour Change and Operations teams. Signs will be printed and installed early in 2010/11.

Track management: Work on track management is being integrated into various programmes run by agencies that manage kauri forest. In particular, work is currently underway in both the Waitakere Ranges and Waipoua Forest.

Animal vector management strategy: The Business Case identified the need to develop a strategy for animal vector management. This work was deferred to 2010/11, awaiting the results of further research.



SPREADING THE WORD

Revision of the communications strategy: The programme's communications strategy was revised early in the 2009/10 year, and a longer term strategy (using new information from forest user research) has been developed.

Management of media enquiries: Close to 20 different media enquiries were received and handled as per agreed protocols developed by the programme.

Development of collateral: New flyers were developed to explain the science behind PTA and a full colour guide explaining how to care for kauri trees was produced. The "Care for Kauri Guide" has proven popular with extra print runs required.

Newsletters: The programme's regular newsletter, Kauri Konnect, was re-designed in full colour and an automatic subscriber list for stakeholders has been implemented. Eight issues of Kauri Konnect were distributed throughout the 2009/10 year.

Website: The kauri dieback website (www.kauridieback.co.nz) was regularly updated

throughout the year and remains a key source of information for the programme. There were hundreds of hits on the website in 2009/10 and several different types of educational material were downloaded.

Event attendance: Staff involved in the kauri dieback programme have attended events visited by high risk users (such as BioBlitz and Fieldays) as well as various multi-sport events to spread the message about the behaviour required to stop the spread of kauri dieback.

End user research: Formative and benchmark research was undertaken to gain a better understanding of forest users' behaviour and how to communicate with them about kauri dieback. This work informs the engagement strategies and provides benchmarks for future research.

Signage: New track signage has been developed. This work will continue into 2011 with the production of other signage material, such as education boards and interpretive panels for larger areas, and signs in Te Reo Māori.



PROGRAMME MANAGEMENT, PLANNING AND MONITORING

Team establishment: The Operations and Logistics work stream lead roles were permanently filled in 2009/10 and interim leads put in place for the other work streams. Recruitment processes for the planning and intelligence team lead and relationship manager (Engagement and Behaviour Change) are under way.

While work streams are appropriately resourced, membership of these teams may change if work programmes and priorities require different expertise.

Financial management systems: Arrangements for joint funding and funds management, including a system for financial reporting, have now been agreed by the leadership team.

Planning and reporting framework: When the programme transitioned to long-term management in October 2009 a key task was to develop the Kauri Dieback Long-term Management Plan (LTMP) with input from all partners.

In May 2010 the programme manager implemented a reporting system for work stream leaders to communicate with the programme manager and each other. This system also allows for the programme manager to report to the leadership team and wider long-term management team in a regular and efficient manner.



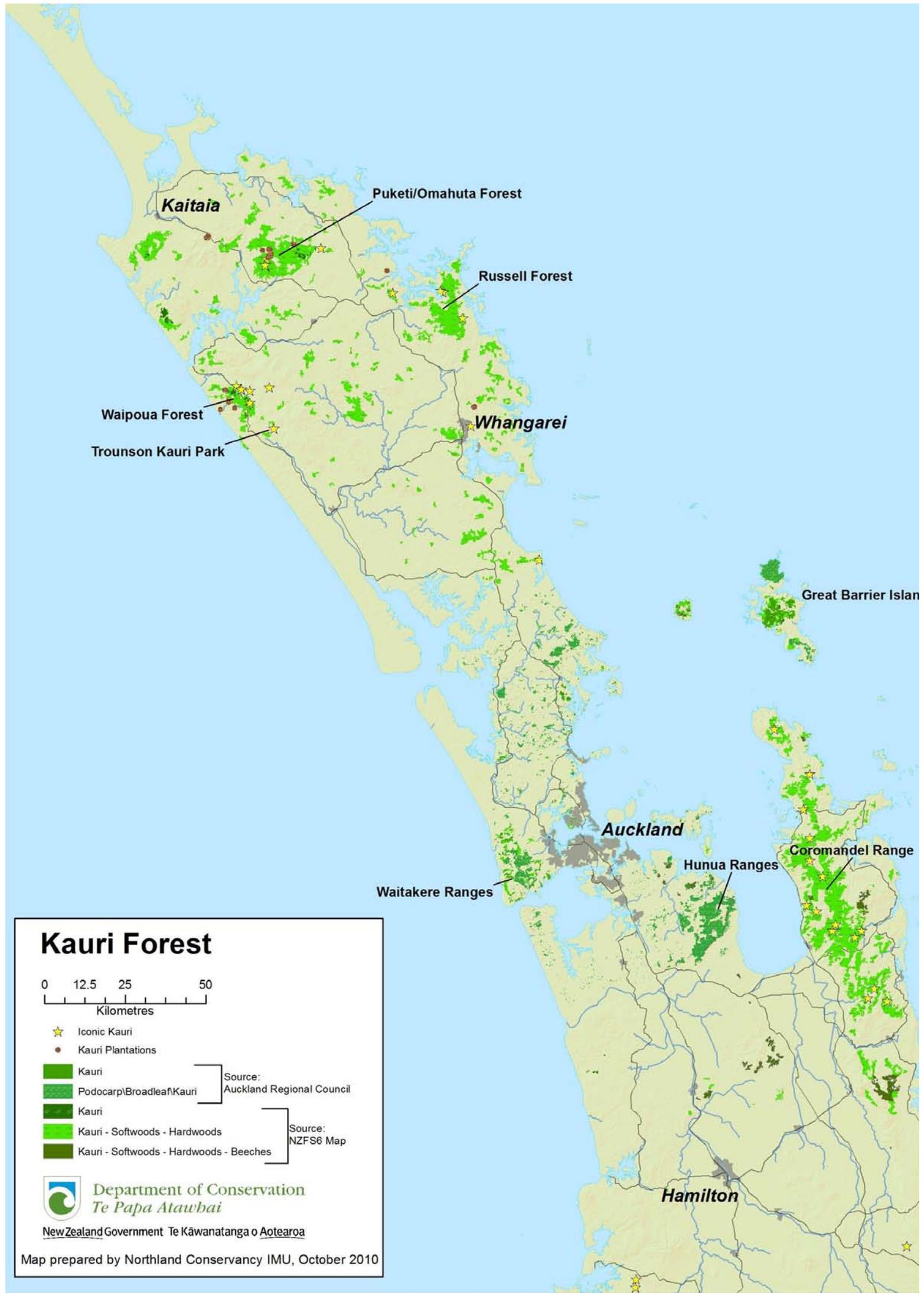
WHERE TO FROM HERE

The annual plan for 2010/11 has been developed by the programme team and focuses on implementation of the surveillance programme, research, operational field activities and increasing public awareness of PTA.

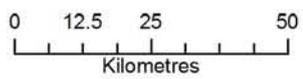
There are several research projects planned, with the major one being the Fundamental Ecology and Pathology of PTA. This research will include developing an understanding of the biology and genetics of PTA, how it moves through the landscape and how it infects and spreads through individual trees. Research will also be carried out to investigate possible control tools and development of a DNA detection tool.

New cleaning stations will be installed at high use areas and several best practice guidelines will be developed to assist decision making regarding track maintenance, installation of signs and machinery hygiene.

Ongoing initiatives to ensure the programme has appropriate and timely communication with programme partners, stakeholders and members of the public will continue. These activities include continuing the publication of newsletters and website enhancement, and targeted contact with key audiences in the form of workshops and meetings.



Kauri Forest



- ★ Iconic Kauri
- Kauri Plantations

- | | |
|---|---|
| <ul style="list-style-type: none"> Kauri Podocarp/Broadleaf/Kauri Kauri Kauri - Softwoods - Hardwoods Kauri - Softwoods - Hardwoods - Beeches | <p>Source:
Auckland Regional Council</p> <p>Source:
NZFS6 Map</p> |
|---|---|

Department of Conservation
Te Papa Atawhai

New Zealand Government Te Kāwanatanga o Aotearoa

